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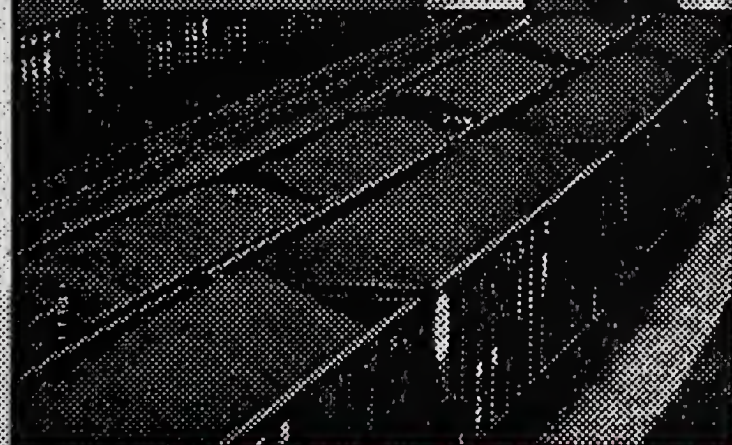
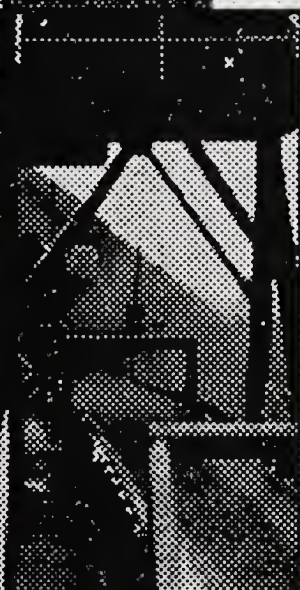
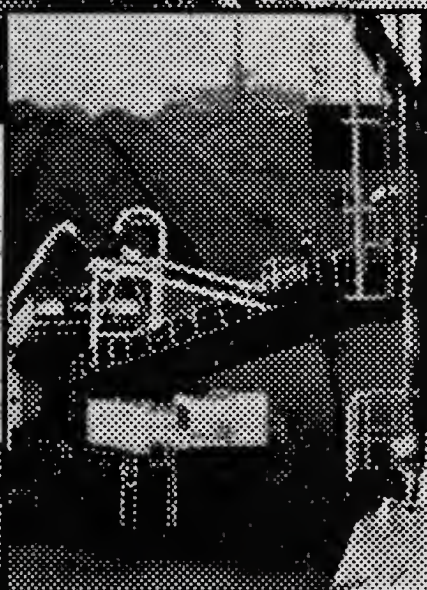
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# ILLINOIS COAL

**ENVIRONMENTALLY AND  
ECONOMICALLY VIABLE**



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**OFFICE OF COAL  
DEVELOPMENT AND MARKETING**



## **Introduction**

Illinois coal is a resource with a rich and proud tradition behind it. Coal not only plays a vital role as an energy source, but the industries involved in the mining, transportation and utilization of coal provide thousands of jobs for Illinoisans and economic stability to many communities across the State.

Throughout its history, the coal mining industry has been characterized by the ability to adapt to changing conditions. New techniques have been devised and put into practice to mine coal more safely and efficiently. Programs of land reclamation have been implemented to minimize the effects of mining operations. This adaptability has allowed coal to maintain its position as the principal fuel for electric generation in the nation and the world.

Today the industry is challenged to find ways to utilize high-sulfur coal with minimum impact on the environment. Advances in clean coal technologies and related approaches are meeting this challenge and providing solutions. The State of Illinois and its energy industries are committed to the development and application of technologies for the environmentally sound use of Illinois coal.

This brochure highlights the efforts of the Illinois Department of Commerce and Community Affairs, Office of Coal Development and Marketing (OCCDM) to ensure the continued development of Illinois' coal resources and the protection of our natural environment.

## **Mission**

The mission of the Office of Coal Development and Marketing is to support research, development, demonstration and awareness of technologies that offer environmentally safe and economically viable methods of coal extraction and utilization.



## Issues

The OCCDM is addressing key issues facing the coal and electric utility industries by:

- developing appropriate policies and strategies for compliance with the federal Clean Air Act;
- studying the many viewpoints regarding acid rain and its effects;
- dealing head-on with global warming, including the collection, verification and dissemination of data and information;
- working to overcome the problem of high sulfur in Illinois' coal resources;
- assessing the socioeconomic impacts of mine closures on Illinois communities, especially in southern regions of the State;
- identifying the most appropriate clean coal technologies for use with Illinois coal;
- educating electric utilities on the advantages of installing CCTs versus switching to low-sulfur (western) coal for Clean Air Act compliance;
- assessing the near- and long-term effects of electric utility deregulation on the Illinois coal industry; and
- finding new uses and markets for coal and coal by-products.

## Goals

The major goals of the OCCDM are to:

- maximize protection of the environment by minimizing emissions of sulfur dioxide and nitrogen oxide;



- minimize the socioeconomic impacts of a shrinking coal industry in Illinois by expanding existing markets and finding new markets both domestic and international;
- promote a comprehensive, long-range energy policy in which
  - Illinois coal plays major role,
  - greater efficiency is incorporated in coal mining operations and coal-burning techniques, and
  - the cost to electric ratepayers is minimized; and
- change public perception about Illinois coal.

## **Finding Solutions to Problems**

The OCCDM's pursuit of answers to present and future energy issues is guided by the beliefs that:

- there are environmental solutions to the adverse impacts of power generation;
- emissions can be reduced significantly to acceptable levels;
- wastes can be transformed into usable by-products with supporting markets;
- incentive programs and other methods must be pursued to offset clean air compliance costs, or else these costs will be passed along by utilities to ratepayers;
- research, development and demonstration (RD&D) programs must bridge the gap from basic and applied research to commercial use of a technology; and
- cost-sharing is essential to reduce risks associated with RD&D projects to an acceptable level.



## **OCDM Organization and Programs**

The **Coal Demonstration and Marketing Section** seeks to build markets for Illinois coal through commercial demonstration of clean coal technologies, education of students and adults on coal extraction and utilization, and development of policies and strategies for promoting Illinois coal use. Activities include:

- identifying new national and international market opportunities for Illinois coal;
- helping Illinois coal producers penetrate new markets;
- conducting awareness and information campaigns on the advantages of Illinois coal through the media, schools and special projects;
- identifying suitable technologies for the clean utilization of high-sulfur coal;
- providing funding support to demonstrate promising technologies on a commercial scale;
- assisting the technology developer by identifying potential hosts for the demonstration project, providing guidance in securing the required permits, and suggesting funding sources for the project;
- providing support for the participants in the U.S. Department of Energy's Clean Coal Technology Program; and
- promoting the adoption of proven clean coal technologies.

The **Research and Development Section** sponsors and promotes the advancement of coal research and development processes with special emphasis on desulfurization and other problem areas related to the use of high-sulfur Illinois coal. Activities include:



- supporting research that achieves environmentally sound use of coal (such as desulfurization) and improves the efficiency and effectiveness of coal extraction and utilization;
- creating continuity between the basic and applied research, development and demonstration phases; and
- prioritizing basic and applied research and selecting projects based on technical merit that will best serve changing energy patterns and market demands.

Since its creation in 1981, the **Illinois Coal Development Board (ICDB)** has been actively involved in establishing coal research and demonstration priorities. All of the OCCDM's coal projects are reviewed and approved for funding by the ICDB, which is comprised of government and industry representatives. The ICDB also advises the OCCDM on its coal development programs and serves as an important link to the coal and electric utility industries.

The **Illinois Clean Coal Institute (ICCI)**, the research arm for the OCCDM, is a nationally recognized research organization dedicated to finding ways of removing the sulfur from coal and solving other environmental problems associated with the use of coal. Located at the Illinois Coal Development Park in Carterville, Illinois, the ICCI administers the largest state-supported coal research program in the nation.

## **Conclusion**

Through the activities of the OCCDM, there is ever-growing recognition of the importance of Illinois coal to the state and nation. As Illinois' most abundant energy resource, coal will be used to meet our long-term energy needs. Coal will continue to symbolize a way of life with a proud heritage in many Illinois communities.




If we fail in our efforts to maintain Illinois coal as a viable force in our country's energy strategy, the impact will go far beyond the loss of mining jobs. Many business sectors of the Illinois economy derive benefits from the coal industry. Mine jobs generate spin-off jobs in the manufacturing and retail trades. These additional jobs provide economic security and social structure for many Illinois communities while generating additional state and local tax revenues. In short, a reduction in the use of Illinois coal will take a human toll, as well as an economic one.

With these thoughts in mind, the OCDM is addressing the issue of how to maximize use of Illinois coal from a number of vantage points. During the past decade:

- more than \$39.0 million in state, federal and private funds have been spent on laboratory-scale research;
- more than \$2.0 million in state funds have been spent on development projects;
- nearly \$138 million in state coal bond funds have been committed to 18 projects aimed at proving the effectiveness and reliability of advanced technologies such as fluidized-bed combustion, low-Btu coal gasification and new generation flue gas desulfurization. These projects have attracted \$200 million in federal and \$462 million in private contributions in support of overall costs; and
- Illinois Industrial Coal Utilization Program provided a loan of \$2.5 million for the conversion of an industrial facility from oil and gas to coal.

As a result of these efforts, promising developments are unfolding. Through the use of clean coal technologies, sulfur dioxide emissions have already been reduced by 35 percent in



 Illinois. There is evidence that using CCTs utilizing high-sulfur Illinois coal will produce lower emissions of sulfur dioxide and nitrogen oxides than a traditional plant that simply switches to low-sulfur western coal. New uses for by-products are being researched and perfected, such as the use of gypsum in the manufacture of wallboard and fly ash in road building materials and cement blocks. These successes only serve to spur the OCCDM forward in the quest to fulfill its mission.

**For More Information Contact:**

**Illinois Department of Commerce and  
Community Affairs**

Office of Coal  
Development and Marketing

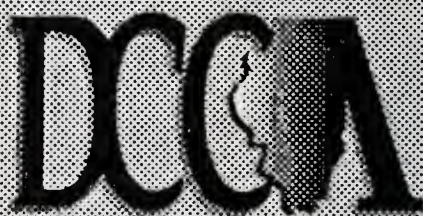
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